

PNEUMATIC-TO-ELECTRIC CONVERTER

Converts a pneumatic input signal to a d-c voltage output signal. TYPE RE1 ☐☐☐ A is suitable for cabinet rack mounting. See Figure 1. TYPE

RE2 ☐☐☐ A (explosion proof) is designed for National Electric Code Class I, Division 1, Group D service. Suitable for wall mounting. See Figure 2.

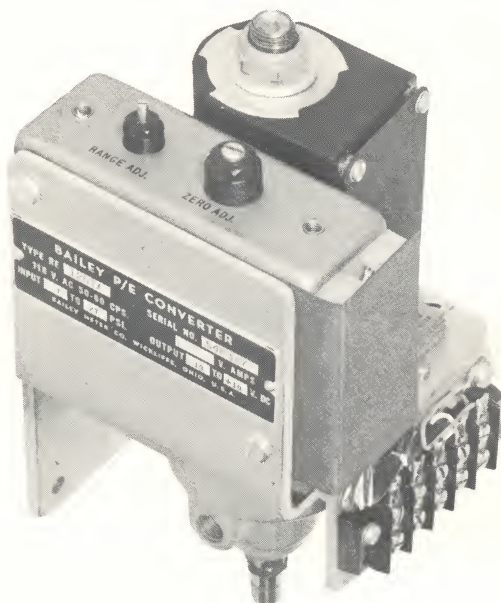


Figure 1 — Bailey Pneumatic-to-electric Converter, TYPE RE1 ☐☐☐ A, suitable for cabinet rack mounting.



Figure 2 — Bailey Pneumatic-to-electric Converter, explosion-proof design, TYPE RE2 ☐☐☐ A.

PNEUMATIC-TO-ELECTRIC CONVERTER

TABLE I

Output ranges	Rack Mounted TYPE RE1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> A			Explosion-Proof TYPE RE2 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> A		
	0 to 100mv d-c	-50 to +50mv d-c	-10 to +10v d-c	0 to 100mv d-c	-50 to +50mv d-c	-10 to +10v d-c
Inputs:						
Standard Available	3 to 15 psig 3 to 27 psig	3 to 15 psig 3 to 27 psig	3 to 15 psig 3 to 27 psig	3 to 15 psig 3 to 27 psig	3 to 15 psig 3 to 27 psig	3 to 15 psig 3 to 27 psig
Accuracy*	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
Power Supply	118v 60c	118v 60c	118v 60c	118v 60c	118v 60c	118v 60c
Power Consumption**	14va .8pf	14va .8pf	14va .8pf	18va .95pf	18va .95pf	18va .95pf
Minimum External Load Resistance	20K ohms	10K ohms	30K ohms	20K ohms	10K ohms	30K ohms
Output Ripple (in % rms)	0.20%	0.10%	0.65%	0.20%	0.10%	0.65%
Ambient Temperature Effect**	±1%	±1%	±0.65%	±1%	±1%	±0.65%
Line Voltage Effect**	±0.5%	±0.25%	±0.25%	±0.5%	±0.25%	±0.25%
Weight	5 lb. Net			21 lb. Net		
Materials	Base: sand-cast aluminum Bellows enclosure: die-cast aluminum Bellows: Bronze			Cover and base: sand-cast aluminum Bellows enclosure: die-cast aluminum Bellows: Bronze		

*Unit calibrated at 75F, 118v 60c; accuracy defined by SAMA Standard RC20.

**Power Consumption and Operating Influences are based on internal voltage regulator in explosion proof design and an external voltage regulator with ±1% accuracy for rack-mounted design. Operating influences are stated as the maximum deviation of output range span, determined by varying the operating conditions between the following limits; temperature, 40F to 140F; voltage 107v to 127v.

E92-14 Pneumatic-to-electric Converter

EXTERNAL AND MOUNTING DIMENSIONS: Certified drawings supplied on request.

Principle of Operation

The pneumatic input signal is received by a bellows assembly. The bellows motion is governed by the range spring opposing the force of the bellows. Attached to the bellows is a rod and core. The core is centered within a Movable Core Transformer (MCT). Change of input pressure results in a change in core position, changing the mutual inductance between the primary and secondary windings of the MCT. The magnitude of the induced voltage varies with core position. A built in demodulator converts this a-c voltage into a d-c output signal.

PNEUMATIC-TO-ELECTRIC CONVERTER TYPES
TABLE II

Output Range	Suitable for cabinet rack mounting.*		Suitable for wall mounting (Class I Division I Group D).**	
	3-15 psig input	3-27 psig input	3-15 psig input	3-27 psig input
-10 to +10v d-c	RE1202A	RE1201A	RE2222A	RE2221A
-50 to +50mv d-c	RE1302A	RE1301A	RE2322A	RE2321A
0 to 100mv d-c	RE1402A	RE1401A	RE2422A	RE2421A

*RE1 □ 02A contains no voltage regulator.

**RE2 □ 22A contains 60c voltage regulator. 50c also available.

Figure 4—Pneumatic-to-electric Converter, TYPE RE2 □ □ □ A.

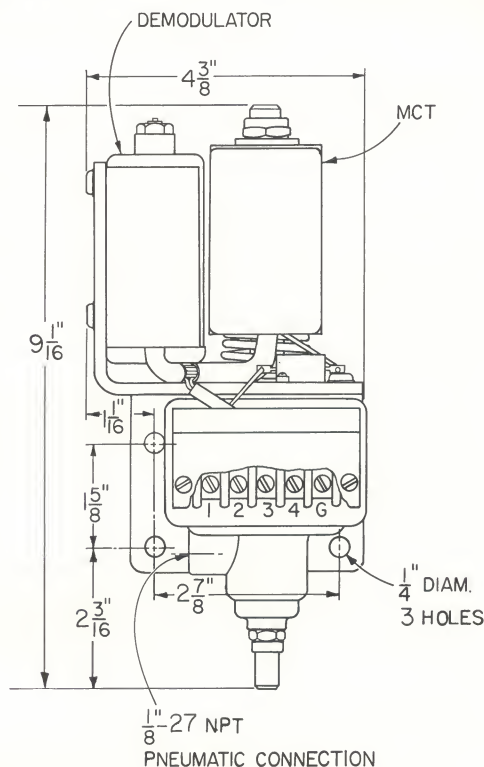


Figure 3—Pneumatic-to-electric Converter, TYPE RE1 □ □ □ A.

